

Amendments to the Claims

1. (Cancelled).

2. (Currently amended). A method of monitoring the effect of *in vivo* administration of a cathepsin S inhibitor to a subject, comprising the steps of:

- a) taking a blood sample of the subject;
- b) purifying the white blood cells from said sample;
- c) making whole cell lysates of the purified white blood cells; and
- d) analyzing the lysates for presence of a p10Ii fragment of invariant chain (Ii) by a suitable assay method, wherein the presence of said p10Ii fragment represents a block in degradation of the invariant chain due to inhibition of cathepsin S resulting from the in vivo administration of the cathepsin S inhibitor.

3. (Previously presented). A method of monitoring the effect of *in vivo* administration of a cathepsin S inhibitor to a subject as defined in claim 2 wherein the suitable assay method in step (d) is Western blotting or enzyme-linked immunosorbent assay.

4. (Previously presented). A method of monitoring the effect of *in vivo* administration of a cathepsin S inhibitor to a subject as defined in claim 2 wherein the subject is a human.